

# WEST Search History

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*DB=PGPB,USPT; PLUR=YES; OP=ADJ*

<input type="checkbox"/>	L13	L12 and l8	15
<input type="checkbox"/>	L12	19971118	33
<input type="checkbox"/>	L11	L10 and (microorganism or plant)	495
<input type="checkbox"/>	L10	L9 and udp and transferase	603
<input type="checkbox"/>	L9	Heparin	33477
<input type="checkbox"/>	L8	L7 or l6 or l5 or l4 or l3 or l2 or l1	21989
<input type="checkbox"/>	L7	(536/23.2)!.ccls.	12619
<input type="checkbox"/>	L6	(536/21)!.ccls.	396
<input type="checkbox"/>	L5	(435/252.3)!.ccls.	9090
<input type="checkbox"/>	L4	(435/193)!.ccls.	1819
<input type="checkbox"/>	L3	(435/183)!.ccls.	4844
<input type="checkbox"/>	L2	(435/101)!.ccls.	948
<input type="checkbox"/>	L1	(435/84)!.ccls.	196

END OF SEARCH HISTORY

=> s heparin/cn  
L1 1 HEPARIN/CN

=> d

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2005 ACS on STN  
RN 9005-49-6 REGISTRY  
ED Entered STN: 16 Nov 1984  
CN **Heparin (8CI, 9CI)** (CA INDEX NAME)  
OTHER NAMES:  
CN  $\alpha$ -Heparin  
CN Ardeparin  
CN Arteven  
CN Bemiparin  
CN Certoparin  
CN Clevarin  
CN Clivarin  
CN Clivarine  
CN CY 216  
CN CY 222  
CN Dalteparin  
CN Fluxum  
CN FR 860  
CN Fragmin A  
CN Fragmin B  
CN Fraxiparin  
CN H 5284  
CN H 9399  
CN Hapacarin  
CN Heparin subcutan  
CN Heparin sulfate  
CN Heparinic acid  
CN KB 101  
CN Leparan  
CN Liveracine  
CN Mono-embolex  
CN Multiparin  
CN Nadroparin  
CN Novoheparin  
CN OP 386  
CN OP 622  
CN Pabyrn  
CN Parnaparin  
CN Parvoparin  
CN Reviparin  
CN Sandoparin  
CN Sublingula  
CN Tinzaparin  
CN Triofiban  
CN Vetren  
CN Vitrum AB  
DR 9075-96-1, 11078-24-3, 11129-39-8, 104521-37-1, 37324-73-5, 91449-79-5  
MF Unspecified  
CI PMS, COM, MAN  
PCT Manual registration, Polyester, Polyester formed  
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO,  
CA, CABA, CANCERLIT, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMLIST,  
CIN, CSCHEM, DDFU, DIOGENES, DRUGU, EMBASE, HSDB\*, IFICDB, IFIPAT,  
IFIUDB, IMSCOSEARCH, IMSDRUGNEWS, IMSPATENTS, IMSRESEARCH, IPA, MEDLINE,  
MRCK\*, MSDS-OHS, NAPRALERT, NIOSHTIC, PHAR, PIRA, PROMT, PS, RTECS\*,  
TOXCENTER, USAN, USPAT2, USPATFULL  
(\*File contains numerically searchable property data)  
Other Sources: DSL\*\*, EINECS\*\*, WHO

L2 ANSWER 29 OF 29 REGISTRY COPYRIGHT 2005 ACS on STN

RN 2616-64-0 REGISTRY

ED Entered STN: 16 Nov 1984

CN  $\alpha$ -D-Glucopyranuronic acid, 1 $\rightarrow$ P'-ester with uridine  
5'-(trihydrogen diphosphate) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN  $\alpha$ -D-Glucopyranuronic acid, ester with uridine 5'-pyrophosphate (6CI)

CN Glucopyranuronic acid, 1-ester with uridine 5'-pyrophosphate (7CI)

CN Glucopyranuronic acid, 1 $\rightarrow$ 5'-ester with uridine 5'-(trihydrogen pyrophosphate),  $\alpha$ -D- (8CI)

OTHER NAMES:

CN UDP-D-glucuronic acid

CN **UDP-glucuronic acid**

CN Uridine 5'-diphospho- $\alpha$ -D-glucuronic acid

CN Uridine 5'-diphosphoglucuronic acid

CN Uridine diphosphate glucuronic acid

CN Uridine diphospho-D-glucuronic acid

CN Uridine diphosphoglucuronic acid

CN Uridine pyrophosphoglucuronic acid

FS STEREOSEARCH

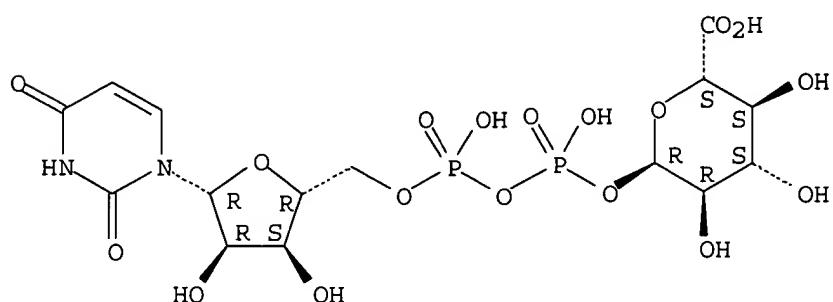
DR 14520-48-0, 3545-73-1, 5918-40-1, 27939-24-8, 30329-32-9

MF C15 H22 N2 O18 P2

LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS,  
BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CHEMCATS, CSCHEM,  
EMBASE, IFICDB, IFIPAT, IFIUDB, MEDLINE, NIOSHTIC, TOXCENTER, USPAT2,  
USPATFULL

(\*File contains numerically searchable property data)

Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

734 REFERENCES IN FILE CA (1907 TO DATE)

11 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

735 REFERENCES IN FILE CAPLUS (1907 TO DATE)

45 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> d full his

(FILE 'HOME' ENTERED AT 15:48:51 ON 01 APR 2005)

FILE 'REGISTRY' ENTERED AT 15:49:24 ON 01 APR 2005  
L1 1 SEA ABB=ON PLU=ON HEPARIN/CN

FILE 'HCAPLUS' ENTERED AT 15:49:31 ON 01 APR 2005

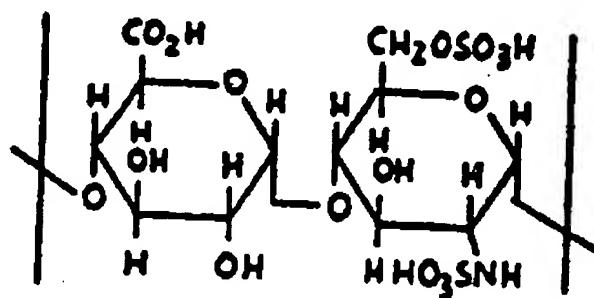
FILE 'REGISTRY' ENTERED AT 15:49:34 ON 01 APR 2005  
L2 SET SMARTSELECT ON  
SEL PLU=ON L1 1- CHEM : 49 TERMS  
SET SMARTSELECT OFF

FILE 'HCAPLUS' ENTERED AT 15:49:34 ON 01 APR 2005

L3 45481 SEA ABB=ON PLU=ON L2  
L4 133 SEA ABB=ON PLU=ON L3 (L) TRANSFERASE  
L5 22 SEA ABB=ON PLU=ON L4 (L) UDP  
L6 10 SEA ABB=ON PLU=ON L5 AND PD<19971118

**21 Heparin or derivative**

This subclass is indented under subclass 18.7. Compounds which are polysaccharides containing the following repeating unit wherein the degree of sulfation of the individual components in the polysaccharide is apparently not uniform and may vary at different areas of the carbohydrate chain, and derivatives thereof.



(1) Note. Heparin is a natural substance which can be found in various tissues of mammals, especially the lung, spleen, liver and muscle, and has been used medicinally for coagulation of blood and metabolism of lipids.



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 1: Haemostasis. 1990;20 Suppl 1:146-53.

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## Approaches to the synthesis of heparin.

**Lindahl U.**

Department of Veterinary Medical Chemistry, Swedish University of Agricultural Sciences, Uppsala.

The biosynthesis of heparin is initiated by formation of [GlcA-GlcNAc]<sub>n</sub> polysaccharide chains linked to the core protein of a proteoglycan structure. The polymer is transformed into the mature polysaccharide by a series of modification reactions which involve N-deacetylation and N-sulfation of GlcNAc units, C5 epimerization of GlcA to IdoA residues, and O-sulfation at different positions. Incomplete modification, controlled in part by the substrate specificities of the corresponding enzymes, provides the complex saccharide sequences that are typical for heparin and, in particular, for heparan sulfate. One such structure is the antithrombin-binding region which is comprised by a specific pentasaccharide sequence with a 3-O-sulfated GlcN marker group. Aspects of regulation of polymer modification are discussed.

### Publication Types:

- Review
- Review, Tutorial

PMID: 2083867 [PubMed - indexed for MEDLINE]

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Mar 29 2005 17:30:14